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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,268	05/13/2002	Stuart Licht	LIGHT-4	2270

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EXAMINER

WALKER, KEITH D

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,268

Applicant(s)

LICHT, STUART

Examiner

Keith Walker

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1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. (Israel) 141,527, filed on February 20, 2001. **Information Disclosure Statement**

1. An Information Disclosure Statement has not been filed as of the writing of this office action.

Drawings

2. The drawings received on February 19, 2002 are acceptable for examination purposes.

Specification

3. The disclosure is objected to because of the following informalities: The title of Table 1 refers to "equation 2", (page 6), and it appears that "equation 9" was intended, as described on page 5. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 28-31 recites the limitation "said hydroxide salt" in line 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 4-28 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US Patent 6,489,056 (Davis).

Regarding claim 1 & 2, Davis teaches an alkaline battery made of the half-cells of an anode and cathode, with a separator in between (Col. 1, ll. 66-67). The cathode material is made from silver permanganate (Col. 2, ll. 51-54) and has an electrolyte solution of hydroxide dispersed through out it (Col. 4, ll. 31-35). The silver permanganate formula (AgMnO_4) is described in Table 1, column 6.

Regarding claims 4-23, all of the claim limitations have been considered. The claims are product-by-process claims. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Davis teaches using the end product of silver permanganate as

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described above. Thus the limitations of the precursors are not given patentable weight.

Regarding claims 24-26, the cathode includes 80% by weight the cathode material (Col. 3, ll. 4-7). As stated above, the cathode material is silver permanganate.

Regarding claims 27-28, potassium hydroxide, a solid salt, is used (Col. 3, ln. 52).

Regarding claims 29-30, Davis teaches using 80% cathode material, 3% graphite, and 1% other materials by weight (Col. 3, ll. 4-27) leaving 16% by weight for the electrolyte solution. The electrolyte is 50% KOH by weight (Col. 3, ll. 52-53) and therefore, the cathode can be 8% KOH by weight.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,489,056 (Davis).

The teachings of Davis as described above are incorporated herein.

Davis teaches an alkaline battery made of the half-cells of an anode and cathode, with a separator in between (Col. 1, ll. 66-67). The cathode material is made from silver permanganate (Col. 2, ll. 51-54) and has an electrolyte solution of hydroxide dispersed through out it (Col. 4, ll. 31-35).

Davis doesn't speak directly to the use of the silver permanganate in the form $\text{Ag}(\text{MnO}_4)_2$. Transition metals have an inherent property of having multiple oxidation levels. Silver being a transition metal has two common oxidation states, +1 and +2 (pg.2 of <http://en.wikipedia.org/wiki/Silver>). With such states, when silver bonds to form silver permanganate it can form either AgMnO_4 (+1 state) or $\text{Ag}(\text{MnO}_4)_2$ (+2 state). So when a mixture of silver permanganate is used in the cathode, as Davis does, the mixture will have both forms present.

5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davis in view of US Patent 6,013,390 (Kimiya).

The teachings of Davis as described above are incorporated herein.

Davis teaches an alkaline battery made of the half-cells of an anode and cathode, with a separator in between (Col. 1, ll. 66-67). The cathode material is made from silver permanganate (Col. 2, ll. 51-54) and has an electrolyte solution of hydroxide dispersed through out it (Col. 4, ll. 31-35).

Davis does not speak directly to the higher concentration of hydroxide salt.

Kimiya teaches using a high molar concentration of potassium hydroxide, in the 8 to 14 M range (Col. 5, ll. 66-67), which translates to a 44% - 77% by weight concentration.

The motivation to use the higher concentration is raise the utilization of the active material (Col. 4, ll. 31-33).

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the hydroxide salt concentration of Davis with

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the higher concentration of Kimiya to increase the utilization of the active material and so improve the operation of the battery.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Walker whose telephone number is 571-272-3458. The examiner can normally be reached on Mon. - Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kdw


PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER